Northern Redwoods Oceanic External MPA Array D

Presented by
William Lemos
NCRSG Member
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Overview of EX D

- Collaborative Research Effort
- Based on Conservation Community and Consumptive Community Needs
- Used SAT and BRTF Science Guidelines
- Factored in Scio-Economic Impacts
- Modified original ideas after receiving local input
- Placed primary emphasis on enhancing biodiversity through thoughtfully placed MPAs

Literature Exploration

EXAMPLE: "Effects of Noncompliance on the Success of Alternative Designs of Marine Protected-Area Networks for Conservation and Fisheries Management" by Jacob P. Kritzer, Dept of Biological Sciences, Windsor, ON
From *Conservation Biology*, Volume 18, No. 4, August 2004

"The benefits (of MPAs) have been well documented, with numerous studies demonstrating higher densities and larger body sizes of exploited species and greater overall bio-Diversity within MPAs."

EX D Contributors

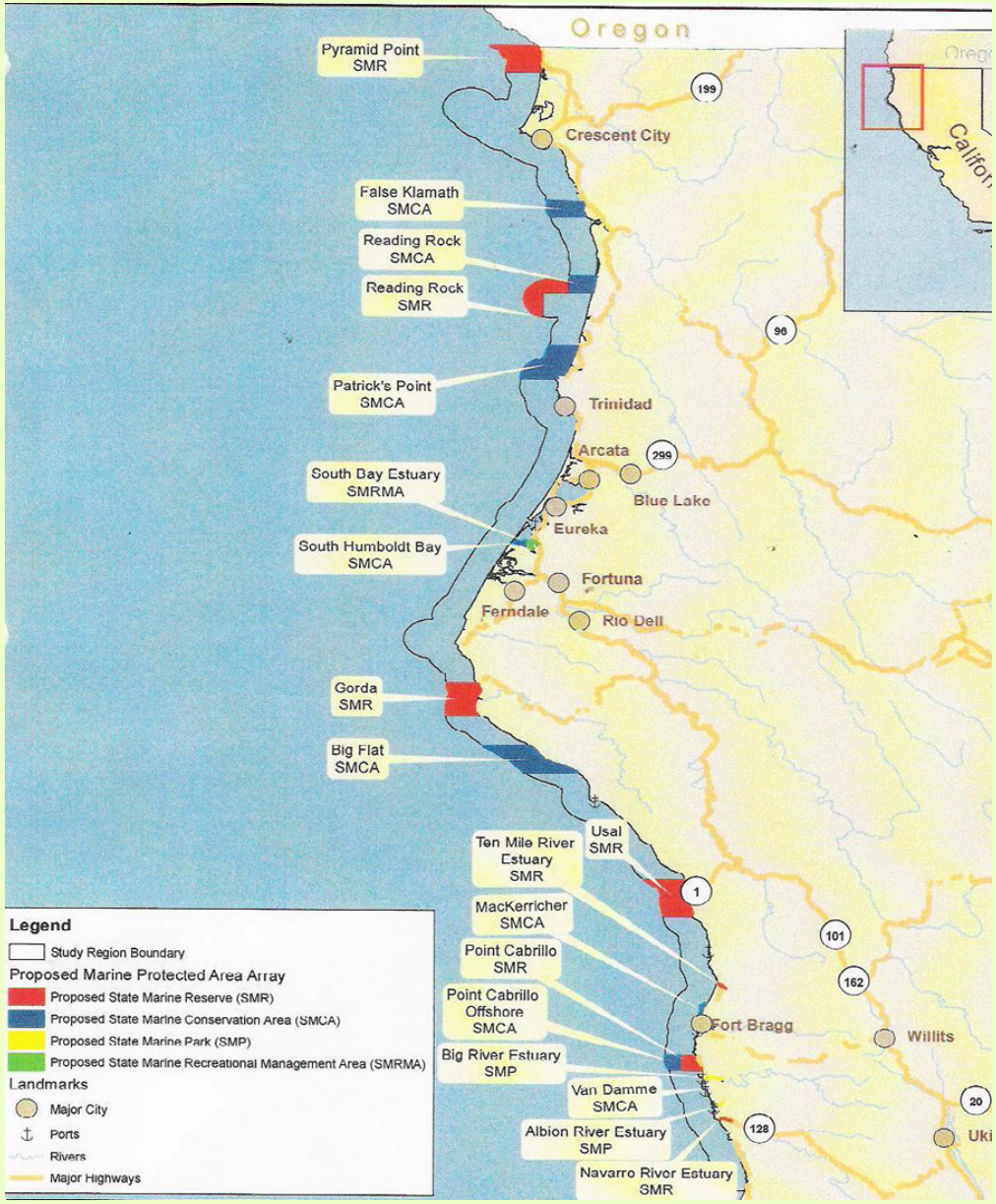
- Conservation First
- Sierra Club, Mendocino Chapter
- Defenders of Wildlife
- National Resources Defense Council
- Ocean Conservancy
- Coastal Action Group
- School of Natural Resources
- Coast Land Trust
- Local Individuals

EX D Goals

- Use MLPA science guidelines
- Include high quality habitats
- Keep MPAs as far as possible from harbors
- Minimize socio-economic impacts
- Select “science laboratory” areas
- Create public awareness for marine conservation
- Protect ceremonial gathering and traditional usage rights of California tribes and tribal communities

Areas of Special Importance

- Southern River Estuaries (Ten Mile, Big, Albion, Navarro)
- Mendocino Headlands
- Point Cabrillo
- Cape Visciano
- Big Flat/Delgada Canyon
- Punta Gorda
- Humboldt Bay
- Reading Rock
- Saint George Reef


Oregon
Pyramid Point SMR
Crescent City
False Klamath SMCA
Reading Rock SMCA
Reading Rock SMR
Patrick's Point SMCA
Trinidad
Arcata
Blue Lake
South Bay Estuary SMRMA
Eureka
South Humboldt Bay SMCA
Fortuna
Ferndale
Rio Dell
Gorda SMR
Big Flat SMCA
Usal SMR
Ten Mile River Estuary SMR
MacKerricher SMCA
Point Cabrillo SMR
Point Cabrillo Offshore SMCA
Big River Estuary SMP
Van Damme SMCA
Albion River Estuary SMP
Navarro River Estuary SMR
Fort Bragg
Willits
199
96
299
1
101
162
20
128
Legend
Study Region Boundary
Proposed Marine Protected Area Array
Proposed State Marine Reserve (SMR)
Proposed State Marine Conservation Area (SMCA)
Proposed State Marine Park (SMP)
Proposed State Marine Recreational Management Area (SMRMA)
Landmarks
Major City
Ports
Rivers
Major Highways

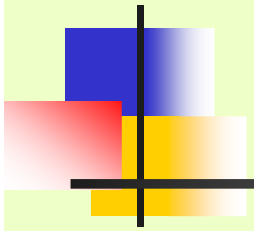
EX D Summary

Type of MPA	#of MPAs	Area(mi^2)	%of Study Region
SMR	7	93.16	9.1%
SMRMA	1	1.20	0.1%
SMP	2	0.27	<0.1%
SMCA	8	84.09	8.2%
All MPAs	18	178.72	17.4%

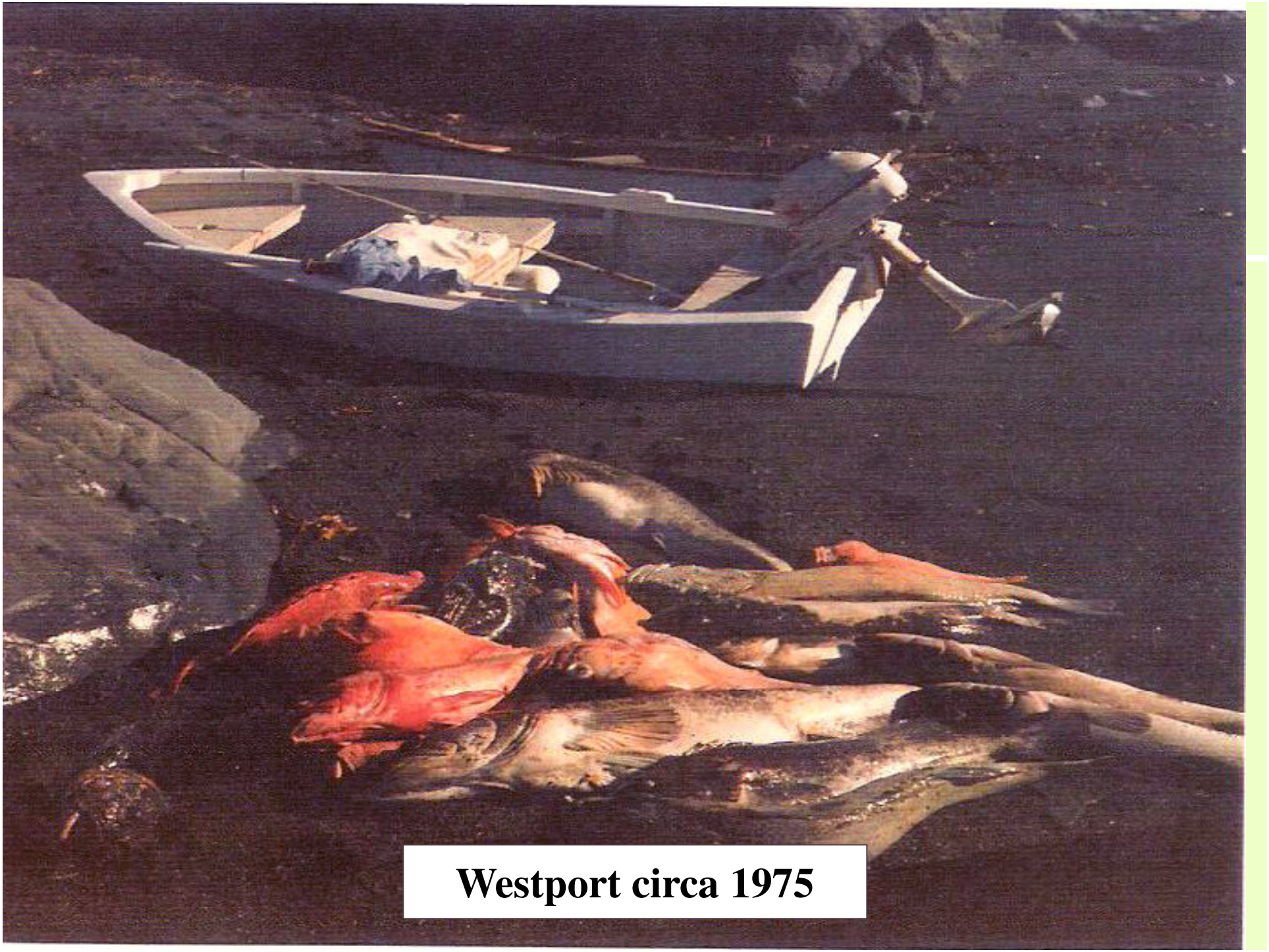
EX D LOP

LOP	#	Area (mi^2)	%Region
Very High	8	94.36	9.2%
High	2	5.91	0.6%
Moderate High	4	76.06	7.4%
Moderate	1	1.06	0.2%
Low	3	0.79	0.1%
Total	18	178.72	17.4%

Defining the Need for Marine Protection



A Photographic Snapshot Overview

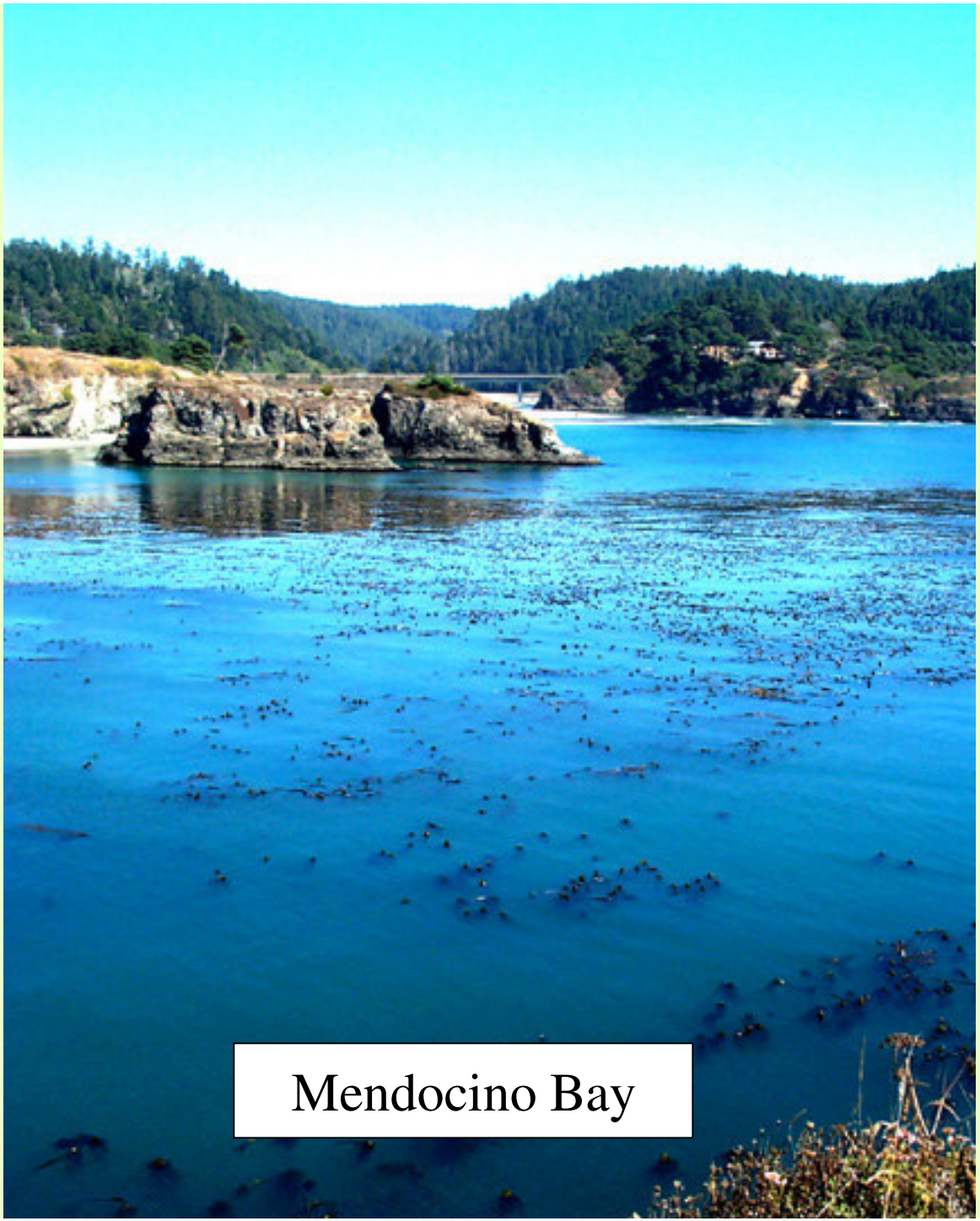


Westport circa 1975


Mendocino Headlands


Big River Estuary

Big River Estuary Tidal Flat


Mendocino Bay

Mendocino Headlands

Russian Gulch State Park

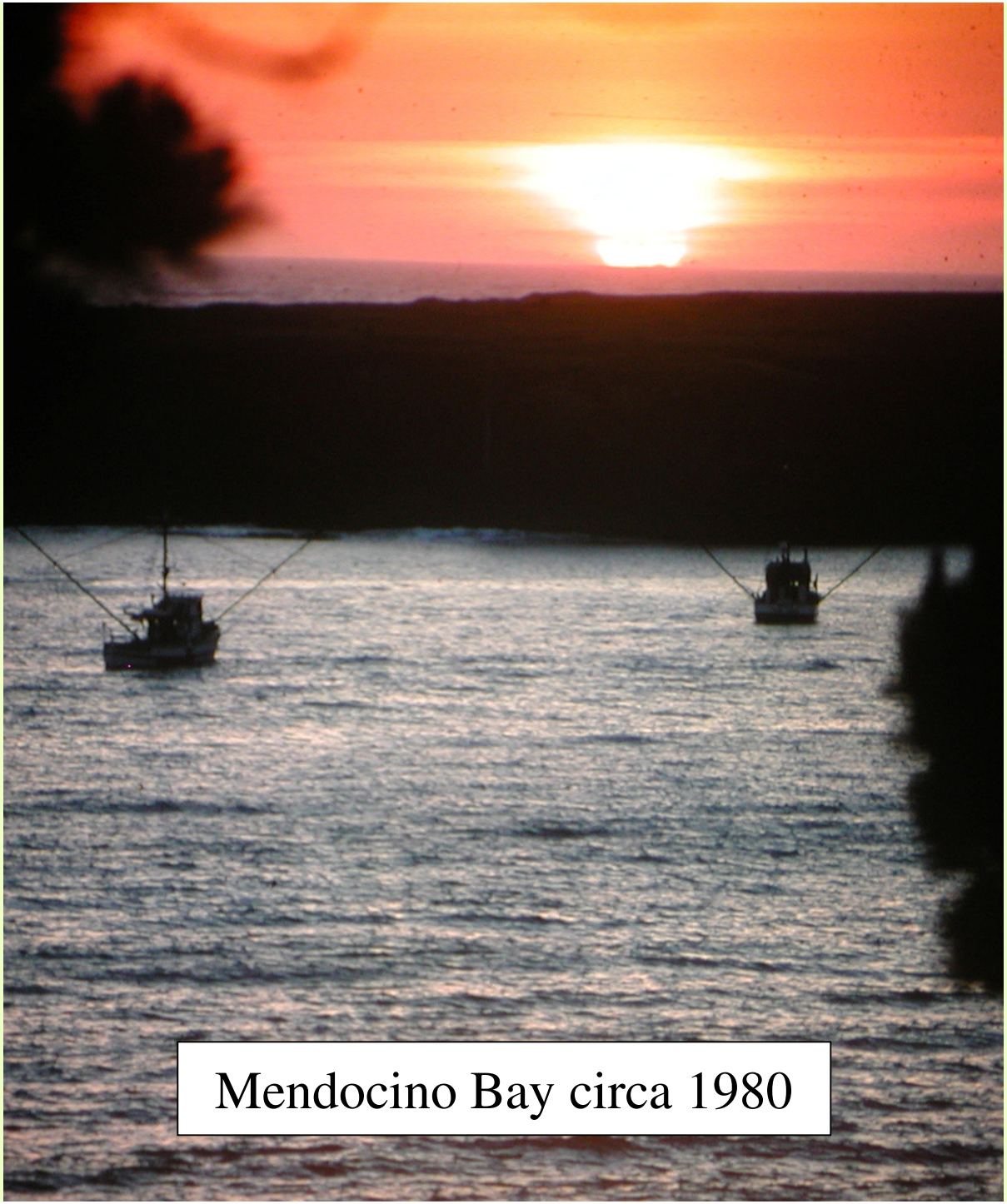
Point Cabrillo: Winter 2010

Table 9: Estimated annual net economic impact for the NCSR

Fishery	Baseline GER	Estimated Costs	Baseline NER (Profit)	ExA	ExB	ExC	ExD	ExE	ExF	ExG	ExH
				$ Reduction in Profit							
Anchovy/Sardine (Lampara Net)	$44,428	$36,875	$7,553	$1,483	$1,075	$1,075	$1,515	$1,483	$1,075	$1,075	$1,075
Dungeness Crab (Trap)	$18,471,736	$11,618,862	$6,852,874	$31,252	$212,038	$330,737	$363,681	$298,695	$221,267	$221,267	$216,700
Herring (Gillnet)	$11,701	$6,787	$4,915	$284	$204	$204	$290	$284	$204	$204	$204
Rockfish (Fixed Gear)	$642,453	$346,264	$296,189	$66,104	$6,574	$39,271	$52,324	$79,529	$6,727	$6,727	$6,345
Salmon (Troll)	$3,027,616	$1,778,153	$1,249,463	$34,957	$27,237	$64,337	$66,191	$48,676	$27,290	$27,290	$26,914
Shrimp (Trap)	$251,315	$158,029	$93,286	$0	$0	$0	$0	$956	$0	$0	$0
Smelt (Brail – Dip Net)	$122,680	$74,322	$48,358	$10,967	$10,813	$12,874	$10,765	$10,571	$11,503	$11,503	$11,459
Surfperch (Hook and Line)	$26,431	$14,264	$12,167	$3,003	$3,156	$3,478	$3,620	$3,087	$3,242	$3,242	$3,241
Urchin (Dive Captain)	$896,780	$431,629	$465,151	$17,947	$13,294	$34,618	$61,799	$47,046	$13,294	$17,031	$13,704
Urchin (Walk-on Dive)	$370,076	$111,023	$259,053	$10,162	$7,520	$19,611	$35,053	$26,650	$7,520	$9,634	$7,752
All Fisheries	**$23,865,216**	**$14,576,208**	**$9,289,008**	**$176,161**	**$281,910**	**$506,206**	**$595,239**	**$516,977**	**$292,121**	**$297,972**	**$287,394**
				% Reduction in Profit							
Anchovy/Sardine (Lampara Net)	100%	83%	17%	19.6%	14.2%	14.2%	20.1%	19.6%	14.2%	14.2%	14.2%
Dungeness Crab (Trap)	100%	63%	37%	0.5%	3.1%	4.8%	5.3%	4.4%	3.2%	3.2%	3.2%
Herring (Gillnet)	100%	58%	42%	5.8%	4.2%	4.2%	5.9%	5.8%	4.2%	4.2%	4.2%
Rockfish (Fixed Gear)	100%	54%	46%	22.3%	2.2%	13.3%	17.7%	26.9%	2.3%	2.3%	2.1%
Salmon (Troll)	100%	59%	41%	2.8%	2.2%	5.1%	5.3%	3.9%	2.2%	2.2%	2.2%
Shrimp (Trap)	100%	63%	37%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%
Smelt (Brail – Dip Net)	100%	61%	39%	22.7%	22.4%	26.6%	22.3%	21.9%	23.8%	23.8%	23.7%
Surfperch (Hook and Line)	100%	54%	46%	24.7%	25.9%	28.6%	29.8%	25.4%	26.6%	26.6%	26.6%
Urchin (Dive Captain)	100%	48%	52%	3.9%	2.9%	7.4%	13.3%	10.1%	2.9%	3.7%	2.9%
Urchin (Walk-on Dive)	100%	30%	70%	3.9%	2.9%	7.6%	13.5%	10.3%	2.9%	3.7%	3.0%
All Fisheries	—	—	—	**1.9%**	**3.0%**	**5.4%**	**6.4%**	**5.6%**	**3.1%**	**3.2%**	**3.1%**

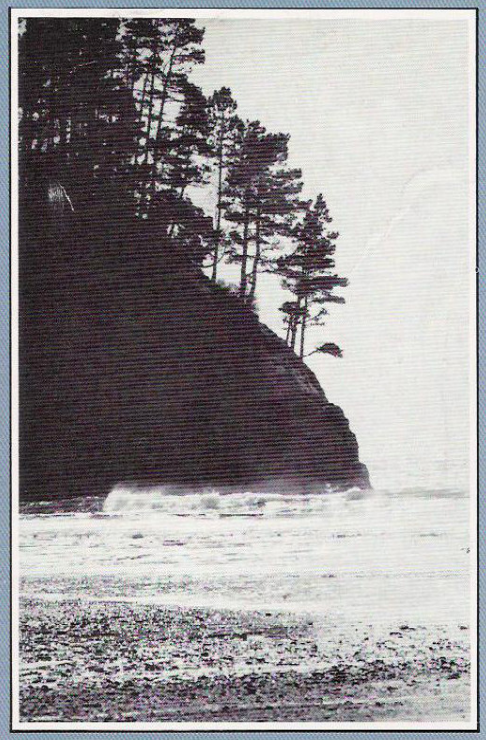

Caspar Bay: Summer 1966

Goat Island, Mendocino: Spring 1990


Mendocino Bay circa 1980

Oil Hearing March: February 1988

In 50 Years We Want This



To Look Like This

Ocean Sanctuary
Its Time Has Come

For more information about Ocean Sanctuary and legislation for permanent ocean protection
contact the
Ocean Sanctuary Coordinating Committee
Box 408 Mendocino, California 95460 707-937-0700

visit our office
450 Main Street Above Alfonso's Wednesday-Sunday, 12 to 5

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